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ABSTRACT

Due to the lack of information relating to drug use and abuse among high school athletes, the author conducted a survey of 2,063 college students in universities in eastern Kentucky. The attempt was to determine what practices these college freshmen and sophomores had observed or experienced while in high school. Over 65% of the males and 27% of the females had participated in varsity athletics while in high school. Comparisons between athletes and non-athletes were made regarding smoking, alcohol use, and the use of drugs such as amphetamines, marihuana, barbituates, etc. The findings presented are derived from a partial analysis of the survey data.
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THE USE AND MISUSE OF DRUGS AMONG HIGH SCHOOL ATHLETES

In a paper presented at the Annual Meeting of the American School Health Association in November, 1968, Dr. Gustav Cwalina made the comment that "there are almost as many publications dealing with drug abuse as there are drug abusers". Now, one might wonder if the number of publications has not surpassed the number of users. Everywhere he looks, one sees and hears statements concerning the use and abuse of drugs. Everyone seems to have some opinion or warning concerning the misuse of drugs.

During the past few years a number of statements have been made concerning the abounding use of ergogenic drugs among professional athletes. Opinions vary considerably among individuals who should be in positions to know about such use. But true or not, the effects of the reports have been to convince the public that such drug use is universal among professional athletes. It is not uncommon for the fan watching his favorite pro team to feel that most of the players are "doped". Not just one or two, but the majority of them.

Most of the attributed use by professional athletes has centered around ergogenic aids or drugs taken to improve the performance of the athlete, especially the amphetamines, steroids, and restoratives. And, even more controversial than the extent of drug use by athletes, is the question as to the effects of doping upon athletic performance. Although most studies have found no significant improvement in the physical performance following the administration of amphetamine type drugs, a few investigators have observed improved performance on some mental and physical tasks. This improved performance may be due to psychological

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factors, as amphetamines are cerebral stimulants which have little effect upon muscular performance. Still their use to get the athlete "up for a game" is highly publicized.

Also receiving a great deal of publicity have been the restorative drugs such as cortisone, butazolidine, etc., and the developmental drugs, the anabolic steroids. The effects of the restoratives which include analgesics, muscle relaxants, and anti-inflammatory substances are less controversial than that of the amphetamines, but their place in athletics is not. A player will undoubtedly be able to return to the field sooner and without pain after an injury if injected with cortisone, novocaine, phenylbutazone, or some other such aid, but the dangers involved are self-evident. The steroids supposedly enable the athlete to have astonishing muscle development and weight gain in a short period of time. Again, their true value is under considerable debate, and serious danger may be involved in their misuse.

Of concern should be the high school athlete. Are these young athletes emulating the drug practices publicized by the professionals? Advertising has proved the extent to which professional athletes are modeled, and if the young athlete believes the drug will aid performance, he is quite likely to try it. It goes without saying that the high school athlete of today has access to almost any drug of choice. Consequently, his attitude toward the benefit of the drug will be the determining factor in its use or non-use.

Unfortunately, the publications which are most frequently read by high school athletes are of the type which contain articles based upon subjective observation and personal opinion with little or no scientific

documentation. These publications often have articles which seem to laud the use of ergogenic aids by athletes. Statements by star athletes to the effect that the only way one can continue to be competitive is to succumb to the use of different drugs are extremely common. One article in Track and Field News would have convinced any high school athlete that the first step to becoming a super-star is the taking of anabolic steroids.

High school athletes have long been conditioned by their coaches to looking for ergogenic aids. Many dietary supplements, for example, have come and gone, but many still linger as evidenced by the widespread administration of vitamins, dextrose tablets, "gator aid", etc., to high school teams. Most of the widely accepted practices are harmless in themselves; however, they are psychological conditioning techniques which encourage the young athlete to be looking for some substance which will aid performance.

The prevalence of publicity given the use of drugs among professional athletes is contrasted by the dearth of information concerning the use of drugs by high school athletes. Virtually nothing has been published giving the extent of misuse by the younger athlete.

The fact is well established, on the other hand, that the amount of drug abuse among the high school and younger aged groups of students is on the increase. Accurate information concerning the actual amount of drug use by students of this age is difficult to determine and undoubtedly varies immensely from locale to locale. It is this investigator's opinion, however, that the extent of drug abuse by the adolescent age group has to date been exaggerated more often than minimized, but this does not lessen the seriousness of the problem.

Because of the lack of information relating to drug use among this age group, a study was conducted by this author of 2063 college students in universities in eastern Kentucky. The attempt was to determine what practices the subjects observed or experienced while in high school. Most of the subjects were college freshmen or sophomores and most had been away from high school only one year or less as the survey was taken in September, 1971.

Although a complete analysis of the data has not been made, some facts which may be of interest have presented themselves. Over 65 percent of the males and 27 percent of the females included in the study had participated in varsity athletics while in high school. Consequently, comparisons between athletes and non-athletes is readily available with large numbers of subjects in each category.

The extent of alcohol use by high school students is indicated by the fact that 80 percent of the men and 60 percent of the women had used it while in high school. Sixty-four percent of the men and 34 percent of the women were occasional or regular users. If one compares the male athletes to non-athletes, it is found that more athletes use alcohol than non-athletes since 82 percent of the athletes had used it, but only 74 percent of the non-athletes.

The majority of the subjects surveyed (72 percent) had attended high school in Kentucky. Consequently, the data may be peculiar to Kentucky and perhaps to eastern Kentucky. This suspicion is borne out to a degree in that 71 percent of the Kentucky students had used alcohol as compared to 76 percent for students from other states. If one isolates certain of the states he finds that 92 percent of the students surveyed from New York,

and 80 percent of those from Pennsylvania and New Jersey, have used alcohol while in high school. These were, however, small groups of subjects with 26 students from each of the states of New York and New Jersey and 30 students from Pennsylvania.

An attempt was made to determine the effects of athletic participation upon the use of alcohol, but only 13 percent of the subjects felt that their participation or non-participation in varsity athletics had influenced such use. However, 27 percent of the male athletes felt their participation had influenced their use and 79 percent of these felt it had contributed to less use, yet this is the group which indicated the most widespread use of alcohol. It may be, however, that they are using less. Only four percent of the non-athletes felt their lack of participation had influenced their use of alcohol and 68 percent of these also felt they had used less alcohol as a result of non-participation.

Because tobacco and athletics have been adversaries for such a long time, it was felt there would be interest in obtaining information concerning their relationship at the high school level. The findings indicate that fewer high school students smoke than use alcohol. Fifty-one percent of the men and 45 percent of the women had smoked while in high school. It appears that athletics may have a negative influence upon smoking, in as much as, only 47 percent of the male athletes had smoked, but 57 percent of the male non-athletes had smoked while in high school. Merely 14 percent of the athletes were regular smokers, but 24 percent of the non-athletes fit this description. Also of interest among the men is that 30 percent of the athletes felt athletic participation influenced their use of tobacco as compared to nine percent of the non-athletes, and

92 percent of the athletes influenced, felt varsity athletics had contributed to less use.

The primary interest of the present paper, however, was to determine the drug practices of high school students, in particular the athletes. Overall, it was found that 14 percent of the subjects (15 percent of the males and 11 percent of the females) had used drugs while in high school. But, almost one half (49 percent) of those using drugs had used them on five or less occasions and 70 percent on ten or less occasions. Twenty-four percent of the males and 31 percent of the females, however, indicated they had used drugs more than 20 times. It should be noted that the questionnaire used did not allow for a response of more than 20+. It appears, therefore, that high school students have either used drugs on only a few occasions or on many. This may reflect the influence of habituation.

When the males are compared as to athletes and non-athletes it is found that more athletes (17 percent) use drugs than non-athletes (13 percent). The athletes may use them less frequently as evidenced by the fact that 51 percent of the athletes had used drugs on five or fewer occasions and 72 percent had used them on no more than ten occasions. In contrast, only 40 percent of the non-athlete users had used drugs five or less times and 62 percent ten times or less. Twenty-one percent of the athlete and 30 percent of the non-athlete users indicated 20 or more instances of drug use. It would seem, therefore, that even though a larger number of athletes use drugs, on the whole they would use them less frequently than do non-athletes.

The category or type of drug most frequently used was the hallucino-

gens with 79 percent of all users indicating they had used drugs within this category. The high percentage is not a surprising statistic, in as much as, marihuana was included in this category. The other categories listed on the questionnaire, in order of frequency of use, were the Pep Pills (42 percent), Barbiturates (19 percent), Tranquilizers (14 percent), Narcotics (8 percent), Inhalants (6 percent), and a catch-all category of others which was included in the event the subject couldn't recall or did not know which category a particular drug fit (6 percent). The percentage totals exceed 100 because several subjects indicated they had used more than one type of drug.

When one compares the males versus females or athletes versus non-athletes, he finds very little difference in percentage of use in any of the categories of drugs. In considering only those individuals who indicated a use of drugs, however, it is found that only 14 percent of the male athletes had used barbiturates, but among the male non-athlete users 22 percent had used barbiturates. A difference was also found between the male athletes and non-athlete drug users in that 90 percent of the non-athletes had used hallucinogens but only 82 percent of the athletes had used such drugs. The reasons behind these differences have not been postulated.

Although 42 percent of those male athletes using drugs indicated they had used pep pills, this is not much greater than the 39 percent indicated by the non-athletes using drugs. Whether the athlete is using the stimulant drugs in an attempt to improve performance is not known, but it would not seem reasonable to conclude that the greater percentage of drug use among high school athletes over non-athletes is due to the

taking of stimulants alone.

If one wishes to compare the state of residence to drug use, it is found that only 12 percent of the Kentucky students had used drugs as compared to 17 percent of all the other states included by the subjects. The subjects from New York indicated the highest rate of use with 42 percent indicating they had used drugs while in high school. New Jersey was second with 31 percent.

When subjects were asked whether or not their participation or non-participation in athletics had influenced their use of drugs, 11 percent of those responding (700 subjects failed to answer this question) indicated they felt it had. But, almost 23 percent of the male athletes felt their participation in athletics had influenced their decision in the use of drugs and 83 percent of these felt it had contributed to less use. Again, as in the case of alcohol, such opinions may seem in conflict with the findings--that the group with the greatest percentage of users is the male athletes. They have the largest number of users, yet they feel their participation contributes to less use. When one recalls the number of instances of use, however, it becomes clear that a conflict may not exist; the athletes may be using less drugs. Or, perhaps, the non-athletes are really better able to predict the true influence of athletics because only two percent of the non-athletes felt that their use of drugs was influenced by their lack of participation.

Apparently, the subjects felt participation or non-participation in athletics has more influence on others than it did on themselves, because when they were asked their opinion concerning the influence of athletic participation on other persons and not just themselves, 47 percent

felt athletic participation is influential, with 41 percent of all subjects feeling it contributes to less use. After observing such findings, one wonders if athletics are having the positive impact in the alleviation of social problems that they have been credited with by so many. It seems many individuals still believe in the potential, but they are not experiencing the influence.

When a comparison is made between the use of alcohol and the use of drugs, it becomes readily apparent that the use of alcohol is closely allied with the use of drugs. This is evidenced by the fact that 92 percent of those subjects who had used hallucinogenic drugs had also been occasional or regular users of alcohol. Occasional or regular drinkers make up 87 percent of those using pep pills, 79 percent of those using barbiturates, 100 percent of those using narcotics, 95 percent of those using tranquilizers, and 90 percent of those using the inhalants. There appears to be no relationship between the use of tobacco and the use of any of the drugs examined.

The subjects were asked if they had ever taken a stimulant type drug while participating in an athletic event, and ten percent indicated they had. Of these, 44 percent felt it had enhanced their performance, 20 percent felt it had hindered performance, and 36 percent felt it had no effect. As might be expected because of the nature of the question, more of the male athletes (17 percent) than non-athletes had taken a stimulant while participating, and 47 percent of them felt it had enhanced their performance while 36 percent felt it had no effect. Only 18 percent felt it a hindrance.

Still, when the subjects were asked whether they felt drugs could

improve athletic performance, 59 percent said no, and 27 percent had no opinion. Only 14 percent felt they could. A discrepancy between the opinions of all subjects and the observed effects of those using stimulant drugs may be explained by the fact that only ten percent of the subjects had actually taken a stimulant while participating in an athletic event, and it is reasonable to assume that those using drugs while performing have a positive attitude toward the drugs' effects, and one wonders what impact such an attitude would have on the actual effects experienced. In other words, perhaps the enhanced performance the individuals experienced was due to psychological factors.

It may be encouraging to those concerned about the misuse of drugs by athletes that only 14 percent of the subjects felt that athletic performance can be enhanced by drug use. It must be noted, however, that 17 percent of the athletes (male) felt performance could be augmented through the use of drugs. This causes one to wonder again about the effect the publicity of drug use among the professionals is having on the attitudes of younger athletes. Are high school athletes being sold on the idea of ergogenic aids by the statements they encounter about them?

The widespread use of drugs among high school athletes is again evidenced by the fact that 38 percent of the subjects answered "yes" to the question "did you know of any high school athlete who participated in athletics while using drugs?" Since many of the subjects are from the eastern Kentucky region, it may be that some of the observations of athletes using drugs may have been duplications. Also, some confusion may have existed as to the meaning of the phrase "participated in athletics while using drugs". Some individuals may have interpreted the phrase to refer to

the athlete during his particular sport's season while others may have felt it referred to the athlete during the actual game situation.

Regardless of the meaning applied to the phrase, the findings indicated a large number of high school athletes have been observed using drugs. The actual number of athletes cannot be determined from the data because the questionnaire did not allow for the subject to respond to having known of more than 20+ athletes. But, if for the sake of convenience, it can be allowed to tally as 20 each response of those subjects indicating they knew 20 or more athletes then the figure 4147 can be obtained as the total number of high school athletes observed using drugs. It is stressed that this number is a minimum number and is given for convenience only. For example, 46 subjects indicated they knew of 20 or more athletes; how many more than 20 is not known. It should further be noted that most subjects (91 percent) knew of less than ten athletes using drugs.

Continuing the mal-practice of tallying those responses of 20+ as equal to only 20, a total of 4458 instances of drug use by athletes is obtained. This is probably an even more inaccurate number than for the number of athletes because here, 78 persons or ten percent of those responding indicated they knew of 20 or more instances of drug use. Also, some subjects who indicated they knew of a number of athletes using drugs did not react to the question concerned with the number of instances. This unavoidably results in an inaccurately low number of instances. It is not felt that these inaccuracies are serious, if one recognizes the fact that they are in truth low numbers indicating the immensity of the true picture. Even though the data are not complete, they do verify the

fact that a great many high school athletes have been observed using drugs.

A number of the observed instances of drug use (23 percent) were under medical supervision and in 28 percent of the cases the coach was aware of the drug use. The statistic of 28 percent indicated that there is a great deal of drug use by athletes without the coach's awareness. In talking with high school coaches, it soon becomes apparent that many of them are not looking for drug use because they don't know what procedure to follow if they find it. When asked, they usually state that some of their athletes are probably using drugs but they don't know for sure which ones. And, no effort is being made to find out.

Of considerable concern and importance because it reflects the attitude of the athlete toward the effects of drugs, is the finding that in 57 percent of the instances of drug use by athletes, the subjects felt the drug was taken to improve performance. This would indicate that educators and coaches in particular have a tremendous responsibility to re-educate those individuals they are charged with in the high schools.

Also, of interest and importance is a recognition of the sports most often involved in drug use. Football players are, far and away, the most frequent users of drugs with 41 percent of all instances being in this sport. This is undoubtedly due in part to the large number of individuals actually participating in football. Also, it may be partly due to the emphasis placed by athletes on the importance of "getting up" for a football game. This theory is supported to a degree by the fact that the runner-up sport as to frequency of drug use goes to basketball (21 percent of the instances) which is another sport requiring the athlete to be "up". It must be conceded, basketball also probably ranks second with

regard to overall number of participants. The other sports in rank order were track and field (14 percent of the instances), baseball (10 percent), wrestling (7 percent), swimming (4 percent), and other sports (3 percent). The category of other sports included several sports and often the subjects did not indicate what the sport was, but cheer leading was mentioned more than once.

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